

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: SCOTT A COOPER  
SERIAL NO.: 10/612,829 CONFIRMATION No.: 3869  
FILING DATE: JULY 1, 2003  
TITLE: LOW DISTORTION BAND-PASS ANALOG TO DIGITAL  
CONVERTER WITH FEED FORWARD  
EXAMINER: LAUTURE, JOSEPH J.  
ART UNIT: 2819

**CERTIFICATE OF MAILING**

I hereby certify that this paper is being deposited with the United States Postal Service as First Class  
Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450,  
on the date printed below:

Date: 3/18/05

Name: Lola R. Salazar  
Lola R. Salazar

COMMISSIONER FOR PATENTS  
P.O. Box 1450, ALEXANDRIA, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

Each item of information listed in the attached FORM PTO-1449, for which a copy of each is attached (unless the blanket waiver referred to below applies), may be material to the examination of the above-identified application and is, therefore, submitted in compliance with the duty of disclosure defined in 37 CFR §§ 1.56, 1.97 and 1.98. The Examiner is requested to review, consider and document each such item in the official record of this application.

Note: If this box ☒ is checked, this case was filed after June 30, 2003 and qualifies for the blanket waiver of deposit of copies of U.S. Patents and U.S. Patent Application

Publications in accordance with the written waiver of 37 CFR §1.98 (a)(2)(i) dated July 11, 2003. Accordingly, such copies are not attached.

This Information Disclosure Statement under 37 CFR §§ 1.56, 1.97 and 1.98 is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that any one or more of these items constitutes prior art.

**I**

This statement is filed pursuant to (**CHECK ONE BOX**):



**37 C.F.R. § 1.97(b).**

This information disclosure statement is filed either:

- (1) within three months of the filing date of a national application other than a continued prosecution application under §1.53(d);
- (2) within three months of the date of entry of the national stage as set forth in 37 C.F.R. §1.491 in an international application;
- (3) before the mailing date of a first office action on the merits; **or**
- (4) before the mailing of a first office action after the filing of a Request for Continued Examination under 37 C.F.R. §1.114, **whichever event occurs last.**

**Accordingly, this information disclosure statement requires no fee and no certification.**



**37 C.F.R. § 1.97(c).**

This information disclosure statement is filed **after** the period specified in 37 C.F.R. § 1.97(b), but **before** the mailing date of any of the following:

- (1) a final action under 37 C.F.R. § 1.113;
- (2) a notice of allowance under 37 C.F.R. § 1.311; **or**
- (3) an action that otherwise closes prosecution in the application.

**Accordingly, this information disclosure statement requires either:**

- (1) the fee specified in 37 C.F.R. § 1.17(p) for submission of an information disclosure statement under 37 C.F.R. § 1.97(c); **or**
- (2) a certification according to 37 C.F.R. § 1.97 (e)(1) or (2).



**37 C.F.R. § 1.97(d).**

This information disclosure statement is filed **after** the period specified in 37 C.F.R. § 1.97 (c).

**Accordingly, this information disclosure statement requires:**

- (1) a certification in accordance with 37 C.F.R. § 1.97(e); **and**
- (2) the fee specified in 37 C.F.R. § 1.17 (p) to consider an information disclosure statement under 37 C.F.R. § 1.97(d).

If this statement crosses in the mail with an office action, or is otherwise not in the indicated category of 37 C.F.R. § 1.97, it is respectfully requested that this statement be treated in the next appropriate category and made of record. **To the extent required, please treat this paper as a conditional petition for acceptance of the information disclosure statement.**

## II

Fees Due (**CHECK ONE BOX**):

- ☒ No fee is due.
- ☐ The fee specified in 37 C.F.R. § 1.17(p) for submission of an information disclosure statement under 37 C.F.R. § 1.97(c) or 37 C.F.R. § 1.97(d) is enclosed (**\$180**).

## III

Certification (**CHECK ONE BOX**):

- ☒ No certification is necessary.
- ☐ Pursuant to 37 C.F.R. § 1.97(e)(1), the undersigned hereby certifies:  
That each item of information contained in this information disclosure statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this information disclosure statement.
- ☐ Pursuant to 37 C.F.R. § 1.97(e)(2), the undersigned hereby certifies:  
No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this information disclosure statement was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this information disclosure statement.

IV

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Please charge any additional required fee or credit any overpayment to our deposit account number 50-1698.

Dated: 3/18/05

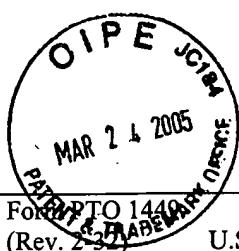
Respectfully submitted,  
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Form PTO 1449 (Rev. 2-97)				U.S. Department of Commerce Patent and Trademark Office		Atty. Docket No. IMPJ-0015		Serial No. 10/612,829	
<b>Information Disclosure Statement by Applicant</b>						Applicant: Scott A. Cooper			
(Use several sheets if necessary)						Filed: 7/1/2003		Group: 2819	
<b>U.S. Patent Documents</b>									
Init.		Document No.	Date	Name	Class	Subclass	Filing Date		
		3,958,236	5/18/1976	Kelly					
		4,163,947	8/7/1979	Weedon					
		4,763,105	8/9/1988	Chyun					
		4,914,440	4/3/1990	Ramet					
		4,962,380	10/9/1990	Meadows					
		4,968,988	11/6/1990	Miki et al.					
		5,099,156	3/24/1992	Delbruck et al.					
		5,177,697	1/5/1993	Schanen et al.					
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		5,841,384	11/24/1998	Herman et al.					
<b>Foreign Documents</b>									
								<b>Translation</b>	
Init.		Document No.	Date	Country	Class	Subclass	Yes	No	
		0 298 618	1/11/1989	EP			X		
<b>Other Documents (Including Author, Title, Date, Pertinent Pages, etc.)</b>									
		Bastos, et al., "A 12-bit Intrinsic Accuracy High-Speed CMOS DAC", IEEE Journal of Solid-State Circuits, Vol. 33, No. 12, December 1998, pp. 1959-1969.							
		Bugeja, et al., "A Self-Trimming 14-b 100-MS/s CMOS DAC", IEEE Journal of Solid-State Circuits, Vol. 35, No. 12, December 2000, pp. 1841-1852.							
		Bugeja, et al., "A 14-b, 100-MS/s CMOS DAC Designed for Spectral Performance", IEEE Journal of Solid-State Circuits, Vol. 34, No. 12, December 1999, pp. 1719-1732.							
		Carley, L. Richard, "Trimming Analog Circuits Using Floating-Gate Analog MOS Memory", IEEE Journal of Solid-State Circuits, Vol. 24, No. 6, December 1989, pp. 1569-1575.							
Examiner					Date Considered				

Form PTO 1449 (Rev. 2-32) U.S. Department of Commerce Patent and Trademark Office				Atty. Docket No. IMPJ-0015		Serial No. 10/612,829		
<b>Information Disclosure Statement by Applicant</b>				Applicant: Scott A. Cooper				
(Use several sheets if necessary)				Filed: 7/1/2003		Group: 2819		
<b>U.S. Patent Documents</b>								
Init.		Document No.	Date	Name	Class	Subclass	Filing Date	
		5,870,044	2/9/1999	Dell'ova et al.				
		5,870,048	2/9/1999	Kuo et al.				
		5,933,039	8/3/1999	Hui et al.				
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		5,955,980	9/21/1999	Hanna				
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		6,573,853	6/3/2003	Mulder				
		6,583,740	6/24/2003	Schofield et al.				
<b>Foreign Documents</b>								
							Translation	
Init.		Document No.	Date	Country	Class	Subclass	Yes	No
<b>Other Documents (Including Author, Title, Date, Pertinent Pages, etc.)</b>								
		Diorio, et al., "Adaptive CMOS: From Biological Inspiration to Systems-on-a-Chip"; IEEE, Vol 90, No. 3; March 2002; pp 345-357.						
		Figueroa, et., "A Floating-Gate Trimmable High DAC in Standard 0.25 um CMOS"; Nonvolatile Semiconductor Memory Workshop, Monterey, CA August 2001; pp 46-47.						
		Gray, et al., "Analysis and Design of Analog Integrated Circuits", Second Edition, University of California, Berkeley, 1984, pp. 66-71.						
		Hyde, et al.; "A Floating-Gate Trimmed, 14-Bit, 250 Ms/s Digital-to-Analog Converter in Standard 0.25 um CMOS", Impinj, 2002 Symposium on VLSI Circuits, Honolulu HI; pp 328-331.						
Examiner					Date Considered			

